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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,073	09/15/2006	Hiroshi Kojima	396.46575X00	6460
20457 7590 09/08/2010 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873				
EXAMINER				
VETTER, ROBERT A				
ART UNIT		PAPER NUMBER		
1712				
MAIL DATE		DELIVERY MODE		
09/08/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/593,073

**Applicant(s)**

KOJIMA ET AL.

**Examiner**

ROBERT VETERE

**Art Unit**

1712

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5-8 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI.08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Interval Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION*****Examiner's Comments***

An amendment amending claim 1, cancelling claims 3-4 and 9-11 and adding new claim 12, was received and entered on 6/28/10.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (JP 2000-281973) in light of Suzuki et al. (US 6,626,987) and Crompton et al. (US 4,017,418).

**Claims 1-2:** Ito teaches a method of forming a plastic lens comprising the steps of providing modified colloid particles of stannic oxide/zirconium oxide (component (A)) and an organosilicon compound (component (B))(Abst.) wherein the colloid particles are provided by a method comprising the steps of: (a) providing colloid particles of stannic oxide having a size of 4-50nm wherein the concentration of stannic oxide is less than 30% by weight (§ 0010); (b) mixing the stannic oxide sol of (a) with an aqueous solution of an oxy zirconium salt wherein the aqueous solution of an oxy zirconium salt has a concentration of 0.5-50% oxy zirconium salt (§ 0013), the sol of (a) has a concentration of 0.5-50% stannic oxide (§ 0007), and the weight ratio of zirconium oxide to stannic oxide in the mixture is 0.02-1.0 (§ 0014); (c) subjecting the mixture of (b) to a heat treatment at 60-200°C for 0.1-50 hours (§ 0015); (d) preparing an aqueous solution which contains a tungstate, stannate and silicate (claimed tungsten salt, tin salt and salt of silicic acid) in amounts such that a weight ratio of  $\text{WO}_3\text{:SnO}_2$  is 0.1-100 and of  $\text{SiO}_2\text{:SnO}_2$  is 0.1-100 (§ 0016) and forming a sol by removing cations from the solution (§ 0020) wherein the particles are 2-7 nm (§ 0020); (e) mixing the sols of (c) and (d) (§ 0029) in an amount such that the  $(\text{ZrO}_2 + \text{SnO}_2)_2$  component is 100 parts by weight and the  $(\text{WO}_3 + \text{SnO}_2 + \text{SiO}_2)$  component is

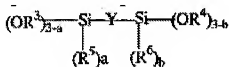
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2-100 parts by weight at 60°C (¶ 0030); and (f) removing the anions in the mixture by contacting the mixture with an anion exchanger (¶ 0034).

While Ito teaches the use of colloidal stannic oxide particles of 4-50nm and a stannic oxide weight concentration of less than 30%, it fails to teach how these particles are formed. Suzuki teaches a method of forming colloidal stannic oxide particles with a diameter of 2-60 nm comprising the steps of mixing hydrogen peroxide and metallic tin such that the molar ratio of H<sub>2</sub>O<sub>2</sub>:Sn is 2 and the weight concentration of stannic oxide is 25.2% (14:19-49). Thus, because Ito is silent regarding the formation of stannic oxide colloidal particles and Suzuki teaches a suitable method of forming stannic oxide colloidal particles of a similar size and concentration as those used by Ito, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the colloid stannic oxide particles according to the method of Suzuki in the method of Ito with the predictable expectation of success.

Ito and Suzuki, however, fail to teach the use of an organic acid. Crompton teaches that using an organic acid, such as an oxalic acid (4:24-31) will help stabilize a colloidal sol (4:1-2). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included an oxalic acid in the combined method of Ito and Suzuki in order to have stabilized the colloidal sol.

**Claim 5:** Ito also teaches that the organosilicon compound is represented by the formula R<sup>1</sup><sub>n</sub>Si(OR<sup>2</sup>)<sub>4-n</sub> (¶ 0040) wherein R<sup>1</sup> is a monovalent hydrocarbon with 1-20 carbon atoms, R<sup>2</sup> is an alkyl group having 1-8 carbon atoms, and n is 0, 1 or 2 (¶ 0040). Additionally, Ito teaches that the organosilicon compound is represented by the formula:



wherein R<sup>3</sup> and R<sup>4</sup> each represent an alkyl group having 1-4 carbon atoms, R<sup>5</sup> and R<sup>6</sup> each represent a monovalent hydrocarbon group having 1-5 carbon atoms, Y represents a divalent hydrocarbon group with 2-20 carbon atoms, a and b are 0 or 1, and the plurality of OR<sup>3</sup> and OR<sup>4</sup> groups may be the same or different from each other (¶ 0040).

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**Claim 6:** Ito also teaches that the ratio of component (A) to component (B) is 1-500 to 100 parts by weight (¶¶ 0051).

**Claim 7:** Ito also teaches that the composition includes aluminum acetylacetone (¶¶ 0075).

**Claim 8:** Ito also teaches that a film is formed by vapor deposition on the hard coat (¶¶ 0077).

3. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito, Suzuki and Crompton in light of Scholz et al. (US 5,585,186).

**Claim 12:** Ito teaches that the coating composition for forming a layer on a lens comprises particles with a spindle shape (¶¶ 0067), but fails to teach that the particles have a spherical shape. Scholz, however, teaches a method of forming a plastic hard coat on a lens wherein the metal oxide particles, such as stannic oxide and zirconium oxide, can have a spherical shape instead of an irregular or fibrous shape (e.g., spindle-shaped) (4:55-5:8). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used colloidal particles with a spherical shape in the method of Ito because Scholz teaches that spherical particles were a known equivalent for spindle shaped particles at the time of the invention.

#### ***Response to Arguments***

4. Applicant's arguments filed 6/28/10 have been fully considered but they are not persuasive.

Applicant first argues that Ito fails to teach use of an organic acid. This is not persuasive. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As discussed above, Compton teaches the use of an organic acid.

Applicant next argues that the teaching of Compton is inapplicable to Ito because Compton teaches the use of antimony oxide rather than stannic oxide. This is not persuasive. Compton is applied in the rejection above to show that one of ordinary skill in the art would have

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been motivated to use an organic acid in the method of forming stannic oxide taught by Suzuki. While Compton is directed to a method involving antimony oxide, Suzuki teaches that the method of forming stannic oxide particles is also applicable to making particles of antimony oxide (see, e.g., 4:59-65). Thus, one of ordinary skill in the art would have been motivated to look to Compton as an analogous reference with respect to the use of an organic acid to help stabilize the sol.

Applicant also argues that using particles with a spherical shape, rather than a spindle shape, can provide better stability. This is not persuasive. As discussed above, with respect to claim 12, Scholtz explains that it was known at the time of the invention that particles could be spherical or irregular.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT VETERE whose telephone number is (571)270-1864. The examiner can normally be reached on Mon-Fri 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Vetere/  
Examiner, Art Unit 1712

/Michael Cleveland/  
Supervisory Patent Examiner, Art Unit 1712